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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,608	01/18/2002	Tetsumasa Ito	027929.101-US00	4635

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EXAMINER

FORMAN, BETTY J

ART UNIT	PAPER NUMBER
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1634

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,608	ITO, TETSUMASA	
	Examiner	Art Unit	
	BJ Forman	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-12 and 20-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-12 and 20-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 April 2004 has been entered.

Status of the Claims

2. This action is in response to papers filed 23 April 2004 in which claims 1-3, 9, 11-12 and 20-22 were amended, claims 13-19 were canceled and claims 23-36 were added. All of the amendments have been thoroughly reviewed and entered.

The previous objections and rejections in the Office Action dated 23 December 2003 are withdrawn in view of the amendments. All of the arguments have been thoroughly reviewed but are deemed moot in view of the amendments, withdrawn rejections and new grounds for rejection. New grounds for rejection are discussed.

Claims 1-5, 9-12 and 20-36 are under prosecution.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(f) he did not himself invent the subject matter sought to be patented.

4. Claims 1-5, 9-12 and 20-36 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

The instantly claimed gene detection system is fully disclosed in U.S. Patent No. 6,749,731. The device comprising an electrode support (11), pin electrodes (12), heating and cooling means (peltier, Column 7, line 62) and heat insulating member (i.e. PEEK, 13).

5. Claims 1, 10, 24 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Baumann et al (sup 6,386,851, filed 27 May 1999).

Regarding Claim 1, Baumann et al teach a device comprising an electrode substrate (#21) an electrode (#6) comprising a probe-immobilizing surface of the electrode (i.e. upper surface) heating and cooling means disposed in contact with a surface of the electrode substrate (e.g. laser diode, Column 6, lines 43-60) and an insulating member covering a circumferential surface of the electrode (#9) (Column 10, line 62-Column 11, line 67).

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Regarding Claim 10, Baumann et al disclose the device comprising a plurality of electrodes (Fig. 17).

Regarding Claim 24, Baumann et al teach a device comprising an electrode substrate (#21) a cylindrical electrode (#6) a probe-immobilizing surface of the electrode (i.e. upper surface) heating and cooling means disposed in contact with a surface of the electrode substrate (e.g. laser diode, Column 6, lines 43-60) and an insulating member covering a circumferential surface of the electrode (#9) (Column 10, line 62-Column 11, line 67).

Regarding Claim 30, Baumann et al disclose the device comprising a plurality of electrodes (Fig. 17).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 10-12, 21, 23-28, 30-32, 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caillat et al (U.S. Patent No. 6,126,800, issued 3 October 2000) in view of Baumann et al (sup 6,386,851, filed 27 May 1999).

Regarding Claim 1, Caillat et al teaches a gene detection system comprising an electrode substrate (#210) supporting an electrode (#212) comprising a probe immobilizing support (upper surface of #212 as illustrate by #22a & 22b) heating and cooling means in

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contact with the substrate (i.e. under the chip, Column 4, lines 19-23) and a heat insulating member (#264) (Column 5, line 1-44 and Fig. 5).

Caillat et al specifically teach the electrodes on the substrate are insulated from each other (Column 1, lines 45-48) which clearly suggest an insulation covering but they do not teach the insulating member covers a circumferential surface of the electrode. However circumferentially insulated electrodes were well known in the art at the time the claimed invention was made as taught by Baumann et al. Baumann et al teach a similar device comprising an electrode substrate (#21) supporting an electrode (#6) comprising and an insulating member covering a circumferential surface of the electrode (#9) wherein the insulating member focuses voltage (and resulting heat) thereby facilitating electrode function without disrupting the surrounding solutions (Column 8, lines 8-15 and Column 12, lines 3-11). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the electrode of Caillat et al by covering a circumferential surface of the electrode with an insulator as they suggest (Column 1, lines 45-48) and for the expected benefit of facilitating electrode function without disrupting the surrounding solutions as taught by Baumann et al (Column 8, lines 8-15 and Column 12, lines 3-11).

Regarding Claim 2, Caillat et al teach the system wherein the heating and cooling means comprises a soaking component (i.e. interior of the cuvette comprising solution) disposed in contact with the substrate at a location different from the electrode i.e. in addition to contacting the electrode, the solution contact the entire inner surface of the cuvette and hence, in addition to contacting the electrodes, contacts locations different from the electrode (Column 5, lines 1-44 and Fig. 5).

Regarding Claim 3, Caillat et al teach the system wherein analytes in the solution interact within the temperature-controlled cuvette and wherein the device further comprise a heat resistance layer whereby the temperature of the substrate during analysis at the electrodes is controlled (Column 5, lines 30-46). While they do not teach thermal capacity of

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the substrate and analyte solution (soaking component), it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to provide a soaking component having thermal capacity greater than the substrate. One of ordinary skill in the art would have been motivated to provide a soaking component of relatively high thermal capacity because higher thermal capacity would permit analyte analysis at high temperatures such as those required for nucleic acid melting.

Regarding Claim 4, Caillat et al teach the system wherein the soaking component comprises a temperature sensor (#266) for measuring temperature of the soaking component and an actuation of heating and cooling is controlled according to the temperature measured by the sensor (Column 5, 36-40).

Regarding Claim 5, Caillat et al teach the system wherein the heating and cooling element comprises a heater (Column 4, lines 19-23).

Regarding Claim 10, Caillat et al teach the system comprising a plurality of electrodes (Column 5, lines 1-44 and Fig. 5 and 6).

Regarding Claim 11, Caillat et al teach the system wherein each of a plurality of probes is immobilized on each of the electrodes (Column 1, lines 45-63). The recitation “wherein each of the plurality of probes detects a predetermined base sequence different from each other of the plurality of probes.” is a recitation of device functionality. The courts have stated that a claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Because Caillat et al disclose the claimed structural components, the recitation of intended use does not define the claimed device over that of Caillat.

Regarding Claim 12, Caillat et al teach the device further comprising control means for controlling temperature (Column 5, line 37).

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Regarding Claim 21, Caillat et al teach the device wherein the electrodes project from the surface of the substrate (Fig. 5) but they do not specifically teach pin electrodes. However, the courts have stated that claimed dimensions of a known device do not distinguish over the prior art device when the claimed device would not perform differently from the prior art device. *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). Hence the pin formed electrodes would have been an obvious variation of the electrodes of Caillat et al.

Regarding Claim 23, Caillat et al teach the device of Claim 4 further comprising control means for controlling temperature (Column 5, line 37).

Regarding Claim 24, Caillat et al teaches a gene detection system comprising an electrode substrate (#210) supporting an electrode (#212) comprising a probe immobilizing support (upper surface of #212 as illustrate by #22a & 22b) heating and cooling means in contact with the substrate (i.e. under the chip, Column 4, lines 19-23) and a heat insulating member (#264) (Column 5, line 1-44 and Fig. 5).

Caillat et al specifically teach the electrodes on the substrate are insulated from each other (Column 1, lines 45-48) which clearly suggest an insulation covering but they do not teach the insulating member covers a circumferential surface of the electrode. However circumferentially insulated electrodes were well known in the art at the time the claimed invention was made as taught by Baumann et al. Baumann et al teach a similar device comprising an electrode substrate (#21) supporting an electrode (#6) comprising and an insulating member covering a circumferential surface of the electrode (#9) wherein the insulating member focuses voltage (and resulting heat) thereby facilitating electrode function without disrupting the surrounding solutions (Column 8, lines 8-15 and Column 12, lines 3-11). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the electrode of Caillat et al by covering a circumferential surface of the electrode with an insulator as they suggest (Column 1, lines 45-48) and for the expected

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benefit of facilitating electrode function without disrupting the surrounding solutions as taught by Baumann et al (Column 8, lines 8-15 and Column 12, lines 3-11).

Caillat et al do not teach cylindrical electrodes. However, the courts have stated that claimed dimensions of a known device do not distinguish over the prior art device when the claimed device would not perform differently from the prior art device. *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

The courts have stated that absent evidence to the contrary, a particular configuration of a known device is a matter of choice that would have been obvious to one skilled in the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

Hence, absence evidence to the contrary, the claimed cylindrical electrodes would have been an obvious variation over the electrodes of Caillat.

Regarding Claim 25, Caillat et al teach the system wherein the heating and cooling means comprises a soaking component (i.e. interior of the cuvette comprising solution) disposed in contact with the substrate at a location different from the electrode i.e. in addition to contacting the electrode, the solution contact the entire inner surface of the cuvette and hence, in addition to contacting the electrodes, contacts locations different from the electrode (Column 5, lines 1-44 and Fig. 5).

Regarding Claim 26, Caillat et al teach the system wherein analytes in the solution interact within the temperature-controlled cuvette and wherein the device further comprise a

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heat resistance layer whereby the temperature of the substrate during analysis at the electrodes is controlled (Column 5, lines 30-46). While they do not teach thermal capacity of the substrate and analyte solution (soaking component), it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to provide a soaking component having thermal capacity greater than the substrate. One of ordinary skill in the art would have been motivated to provide a soaking component of relatively high thermal capacity because higher thermal capacity would permit analyte analysis at high temperatures such as those required for nucleic acid melting.

Regarding Claim 27, Caillat et al teach the system wherein the soaking component comprises a temperature sensor (#266) for measuring temperature of the soaking component and an actuation of heating and cooling is controlled according to the temperature measured by the sensor (Column 5, 36-40).

Regarding Claim 28, Caillat et al teach the system wherein the heating and cooling element comprises a heater (Column 4, lines 19-23).

Regarding Claim 30, Caillat et al teach the system comprising a plurality of electrodes (Column 5, lines 1-44 and Fig. 5 and 6).

Regarding Claim 31, Caillat et al teach the system wherein each of a plurality of probes is immobilized on each of the electrodes (Column 1, lines 45-63). The recitation “wherein each of the plurality of probes detects a predetermined base sequence different from each other of the plurality of probes.” is a recitation of device functionality. The courts have stated that a claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Because Caillat et al disclose the claimed structural components, the recitation of intended use does not define the claimed device over that of Caillat.

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Regarding Claim 32, Caillat et al teach the device further comprising control means for controlling temperature (Column 5, line 37).

Regarding Claim 34, Caillat et al teach the device wherein the electrodes project from the surface of the substrate (Fig. 5) but they do not specifically teach pin electrodes. However, the courts have stated that claimed dimensions of a known device do not distinguish over the prior art device when the claimed device would not perform differently from the prior art device. *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). Hence the pin formed electrodes would have been an obvious variation of the electrodes of Caillat et al

Regarding Claim 36, Caillat et al teach the device of Claim 4 further comprising control means for controlling temperature (Column 5, line 37).

8. Claim 9, 22, 29 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caillat et al (U.S. Patent No. 6,126,800, issued 3 October 2000) in view of Baumann et al (sup 6,386,851, filed 27 May 1999) as applied to Claims 1 and 24 above and further in view of Matsue et al (U.S. Patent No. 5,866,321, issued 2 February 1999).

Regarding Claims 9 and 29, Caillat et al teaches a gene detection system comprising an electrode substrate (#210) supporting an electrode (#212) comprising a probe immobilizing support (upper surface of #212 as illustrate by #22a & 22b) heating and cooling means in contact with the substrate (i.e. under the chip, Column 4, lines 19-23) and a heat insulating member (#264) (Column 5, line 1-44 and Fig. 5).

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Caillat et al teach the system wherein the electrode comprises gold (Column 6, lines 1-4) but they are silent regarding the composition of the substrate. However, ceramic substrates for supporting electrodes were well known in the art at the time the claimed invention was made as taught by Matsue et al who teach a similar device comprising a substrate and electrodes wherein the substrate is one of many types known in the art e.g. ceramic (Column 15, lines 63-67). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the well known ceramic substrate to the substrate of Caillat et al based on the teaching of Matsue et al who expressly teach that various types of substrates function equally as electrode substrates (Column 15, lines 63-67).

Regarding Claims 22 and 35, Caillat et al teaches the device as discussed above comprising a temperature control means (Column 5, lines 36-44 and Claim 4) but they do not specifically teach heating means independently controls a temperature of each of the electrodes. However, Matsue et al teach the similar device wherein the heating means controls the temperature at each electrode individually whereby assays are performed with high precision (Column 9, lines 7-29). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the heating means of Caillat et al with the temperature control of each electrode individually for the expected benefit of high precision assays as taught by Matsue et al (Column 9, lines 24-29).

9. Claims 20 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caillat et al (U.S. Patent No. 6,126,800, issued 3 October 2000) in view of Baumann et al (sup 6,386,851, filed 27 May 1999) as applied to Claims 1 and 24 above and further in view of Davies et al (U.S. Patent No. 4,857,831, issued 15 August 1989).

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Regarding Claims 20 and 33, Caillat et al teaches a gene detection system as discussed above (Column 5, line 1-44 and Fig. 5) wherein the electrodes on the substrate are insulated from each other (Column 1, lines 45-48) which clearly suggest an insulation covering but they do not teach the insulating member covers a circumferential surface of the electrode.

However circumferentially insulated electrodes were well known in the art at the time the claimed invention was made as taught by Baumann et al. Baumann et al teach a similar device comprising an electrode substrate (#21) supporting an electrode (#6) comprising and an insulating member covering a circumferential surface of the electrode (#9) wherein the insulating member focuses voltage (and resulting heat) thereby facilitating electrode function without disrupting the surrounding solutions (Column 8, lines 8-15 and Column 12, lines 3-11). Baumann et al are silent regarding the composition of the insulation. However, Davies et al teach the preferred insulation for coating electrodes is polyether ether ketone (PEEK) (Column 9, lines 62-64 and Column 10, lines 19-21). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the insulator of Davies et al to the electrode insulation of Caillat et al and Baumann et al based on the preferred teaching of Davies et al (Column 10, lines 19-21).

10. Claims 1-5, 9-12 and 20-36 are directed to an invention not patentably distinct from claims 1-25 of commonly assigned U.S. Patent No. 6,749,731. Specifically, the instantly claimed gene detection system is fully disclosed in U.S. Patent No. 6,749,731. The device

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comprising an electrode support (11), pin electrodes (12), heating and cooling means (peltier, Column 7, line 62) and heat insulating member (i.e. PEEK, 13).

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned 6,749,731, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 35 U.S.C. 103(c) and 37 CFR 1.78(c) to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re*

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Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-5, 9-12 and 20-36 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 7,749,731. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to a gene detection system and differ only in minor variations. For example, the '731 claims recite further elements e.g. a counter electrode, second and third resins (insulator) and a tabular member into which pin electrodes are inserted. However, the instant claim language "comprising" encompasses the additional elements of the patent device. The claims further differ in that the instant claims recite a heating and cooling means. While the patent claims are not limited to the heating means, the patent specification teaches the first embodiment of the device comprises a Peltier element (Column 7, line 62) and the remaining embodiments all teach the embodiment only differ from the first embodiment in pin and/or pin hole construct (Column 8, lines 16-18, 43-45 and 65-67). Hence, all embodiments of the patented device taught in the specification comprises a heating and cooling means as instantly claimed. Therefore, the instantly claimed device would be obvious in view of the patented device as taught in the specification.

Conclusion

13. No claim is allowed.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

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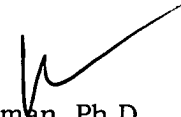
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.



BJ Forman, Ph.D.
Primary Examiner
Art Unit: 1634
July 6, 2004